



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

ASA P

647.3903  
Job Sheet 197809



Part No: 647.3903

Job Qty: 2 pcs

Part Name: Deflector Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/17/19

Job Tracking No:

Created By: Marie Lajeunesse

Due Date: 7/29/19

Description:

Type: SOLD

Note: DWG REV C1 SHEETS 1,7,8 IPP REV:A 14.07.21 NEW ISSUE DD VERF:JLM

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation              | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|------------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                        |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 110   | Packaging 1 - Pick Kit | 2 pcs |            | 7/29/19  | 0.00      | 0.00    | Packaging 1 - 1       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 2       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 3       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 4       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 5       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 6       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 7       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 8       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 9       |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 10      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 11      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 12      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 13      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 14      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 15      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 16      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 17      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 18      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 19      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 20      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 21      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 22      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 23      | PC        | JUL 17 2019 |
|       |                        |       |            |          |           |         | Packaging 1 - 24      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 25      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 26      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 27      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 28      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 29      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 30      |           |             |
|       |                        |       |            |          |           |         | Packaging 1 - 31      |           |             |

Dart Aerospace Ltd.  
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CANADA  
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Container No: S199118



Part: 647.3903

Job No: 197809

Serial No/Batch: S199118

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 07/10/19

|                                 |       |         |           |  |                        |                |
|---------------------------------|-------|---------|-----------|--|------------------------|----------------|
|                                 |       |         |           |  | Packaging 1 - 32       |                |
|                                 |       |         |           |  | Packaging 1 - 33       |                |
|                                 |       |         |           |  | Packaging 1 - 34       |                |
|                                 |       |         |           |  | Packaging 1 - 35       |                |
|                                 |       |         |           |  | Packaging 1 - 36       |                |
|                                 |       |         |           |  |                        |                |
| 120 Small Fab - 2 - B4B         | 2 pcs | 7/29/19 | 0.00 0.93 |  | Small Fab - 1 - B4B    |                |
|                                 |       |         |           |  | Small Fab - 2 - B4B    |                |
|                                 |       |         |           |  | Small Fab - 3 - B4B    |                |
|                                 |       |         |           |  | Small Fab - 4 - B4B    |                |
|                                 |       |         |           |  | Small Fab - 5 - B4B    |                |
|                                 |       |         |           |  | Small Fab - 6 - B4B    | AR 19-7-23     |
|                                 |       |         |           |  | Small Fab - 7 - B4B    |                |
| 130 QC 5                        | 2 pcs | 7/29/19 | 0.00 0.00 |  | QC 5 - 10              |                |
|                                 |       |         |           |  | QC 5 - 12              |                |
|                                 |       |         |           |  | QC 5 - 17              |                |
|                                 |       |         |           |  | QC 5 - 18              |                |
|                                 |       |         |           |  | QC 5 - 19              |                |
|                                 |       |         |           |  | QC 5 - 22              |                |
|                                 |       |         |           |  | QC 5 - 24              |                |
|                                 |       |         |           |  | QC 5 - 3               |                |
|                                 |       |         |           |  | QC 5 - 43              |                |
|                                 |       |         |           |  | QC 5 - 49              |                |
|                                 |       |         |           |  | QC 5 - 51              |                |
|                                 |       |         |           |  | QC 5 - 58              |                |
|                                 |       |         |           |  | QC 5 - 68              |                |
|                                 |       |         |           |  | QC 5 - 9               |                |
|                                 |       |         |           |  | QC 5 - 50              |                |
|                                 |       |         |           |  | QC 5 - 30              |                |
|                                 |       |         |           |  | QC 5 - 40              | JUL 25 2019 40 |
|                                 |       |         |           |  | QC 5 - 61              | 9-89           |
|                                 |       |         |           |  | QC 5 - 81              |                |
| 140 Packaging 3-1 - Stock - B4B | 2 pcs | 7/29/19 | 0.00 0.00 |  | Packaging 3 - 1 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 2 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 3 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 4 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 5 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 6 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 7 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 8 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 9 - B4B  |                |
|                                 |       |         |           |  | Packaging 3 - 10 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 11 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 12 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 13 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 14 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 15 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 16 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 17 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 18 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 19 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 20 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 21 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 22 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 23 - B4B | Pc CC Kody     |
|                                 |       |         |           |  | Packaging 3 - 24 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 25 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 26 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 27 - B4B |                |
|                                 |       |         |           |  | Packaging 3 - 28 - B4B |                |

7/17/2019

[Dart Hawkesbury] Job Sheet - Lajeunesse, Marie

010989

|                |       |         |           |                        |      |
|----------------|-------|---------|-----------|------------------------|------|
|                |       |         |           | Packaging 3 - 29 - B4B |      |
|                |       |         |           | Packaging 3 - 30 - B4B |      |
|                |       |         |           | Packaging 3 - 31 - B4B |      |
|                |       |         |           | Packaging 3 - 32 - B4B |      |
|                |       |         |           | Packaging 3 - 33 - B4B |      |
|                |       |         |           | Packaging 3 - 34 - B4B |      |
|                |       |         |           | Packaging 3 - 35 - B4B |      |
|                |       |         |           | Packaging 3 - 36 - B4B |      |
| 150 QC 21 - SA | 2 pcs | 7/29/19 | 0.00 0.00 | QC 21 - SA - 21        | DAS  |
|                |       |         |           | QC 21 - SA - 70        | 21   |
|                |       |         |           | QC 21 - SA - 53        | 9-89 |

Part Op 110 - (Pick Kit)

Descriptions: 120 - (Small Fab) Assemble as per dwg and apply loctite 598 on all faying surfaces per note .

130 - (QC5- Inspect part completeness to step on W/O)

140 - (Identify as per dwg &amp; Stock Location: \_\_\_\_\_) \*\*\*IDENTIFY AS PER IAW MPP-120\*\*\*

150 - (QC21- Final Inspection - Work Order Release)

JUL 29 2019

## Job BOM

| Part / Item | Component Name | Quantity         | Operation                  | Container |
|-------------|----------------|------------------|----------------------------|-----------|
| 647.3915    | Deflector      | 2 pcs (1 Ea)     | 110-Packaging 1 - Pick Kit | 5132006   |
| 647.3916    | Deflector      | 2 pcs (1 Ea)     | 110-Packaging 1 - Pick Kit | 5157567   |
| 647.3917    | Doubler        | 4 pcs (2 Ea)     | 110-Packaging 1 - Pick Kit | 5157567   |
| CR3213-6-9  | Cherry Rivet   | 12 Ea (6 Ea) + 1 | 110-Packaging 1 - Pick Kit | 5157567   |

→ Scrap

## Job Allocations

| Operation                  | Component Part | Required | Inventory | Allocated |
|----------------------------|----------------|----------|-----------|-----------|
| 110-Packaging 1 - Pick Kit | 647.3915       | 2        | 11        | 0         |
|                            | 647.3916       | 2        | 10        | 0         |
|                            | 647.3917       | 4        | 5         | 0         |
|                            | CR3213-6-9     | 12       | 29        | 0         |

## Part Specifications

Specifications could not be found.

Plex 7/17/19 7:48 AM Dart.lajeunesse.marie

Entered: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐



|                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------|--|
| <b>Job:</b> _____<br><b>Part No.</b> _____                                                                                                                                                                                                                                                                                                                                          |  | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> |  | <b>DEPARTMENT/PROCESS</b><br>Skid-tube <input type="checkbox"/> Cross tube <input type="checkbox"/> Eng. (Non-AW) <input type="checkbox"/><br>Machining <input type="checkbox"/> Small Fab <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/><br>Large Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/><br>Engineering <input type="checkbox"/><br>Water Jet <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Quality <input type="checkbox"/> |  | <b>MRB (Q51042)</b><br><input type="checkbox"/> |  |
| <b>Date :</b> _____                                                                                                                                                                                                                                                                                                                                                                 |  | <b>Sequence #:</b> _____                                                                                                      |  | <b>QTY Affected :</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | <b>Disposition</b>                              |  |
| <b>Description Work Order Deviation</b>                                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                               |  | <b>Completed By</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                 |  |
| <b>Root Cause</b><br>Operator <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Preservation <input type="checkbox"/><br>Material <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Human Factors <input type="checkbox"/> |  |                                                                                                                               |  | <b>FAULT CATEGORY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                               |  | Contamination <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Incomplete/Unclear Instructions <input type="checkbox"/> Drill Holes <input type="checkbox"/> Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                  |  |                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                               |  | Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Crushing <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                |  |                                                 |  |
| Other/Details: _____                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                               |  | Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain Direction <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set/Set-up <input type="checkbox"/>                                                                                                                                                                                                                                                        |  |                                                 |  |
| Positioned Wrong <input type="checkbox"/><br>Outside Tolerance <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Misread <input type="checkbox"/>                                                                                                                                    |  |                                                                                                                               |  | <b>QC / QA Coordinator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                 |  |
| <b>Lead hand / Supervisor</b>                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                               |  | <b>Completed By</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                 |  |

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#### NOTES:

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.

2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;

3. DEBURR AND BREAK ALL SHARP EDGES.

4. IDENTIFY IAW MPP-120.

5. APPLY FIN 3 AS REQUIRED TO ALL FAYING SURFACES OF FIN 6, 7 & 8 UPON ASSY.

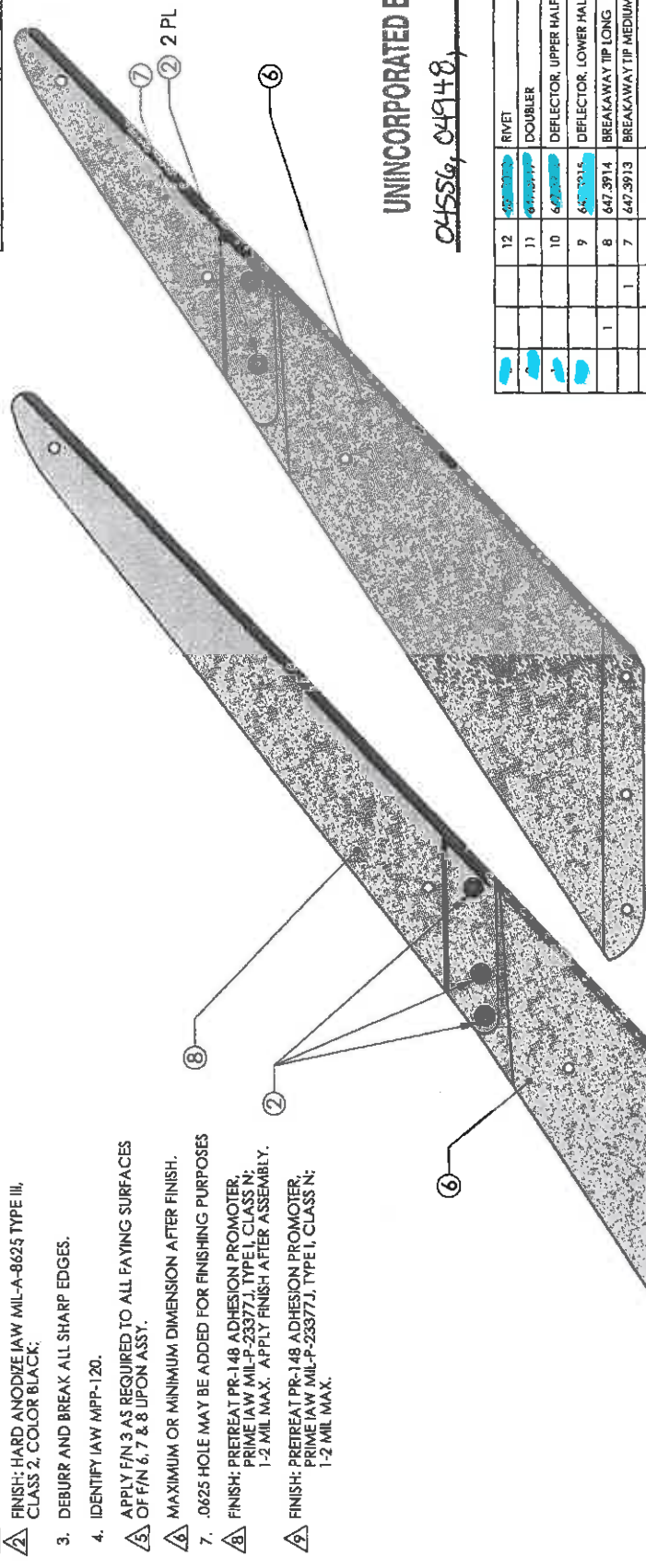
6. MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.

7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES

8. FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.

9. FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.

| REV. | DESCRIPTION                           | DATE     | APPROVED |
|------|---------------------------------------|----------|----------|
| 1    | INITIAL RELEASE                       | 09/05/05 | P. BANC  |
| 2    | INCORPORATED ECN 04556, 04948 & 04949 | 07/07/12 | P. BANC  |
| 3    | INCORPORATED CHANGES                  | 08/02/12 | P. BANC  |
| 4    | INCORPORATED ECN 04556, 04948 & 04949 | 10/02/12 | P. BANC  |



UNINCORPORATED ECN(S)

04556, 04948,

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

647.3902

647.3901

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
|-----|-----|--------|-----------------------|-------|------|
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 4      | 412 UPPER DEFLECTOR   |       |      |
| 1   | 1   | 3      | RIV, LOCITE 598       |       |      |
| 1   | 1   | 2      | RIVET                 |       |      |
| 1   | 1   | 1      | DEFLECTOR ASSY        |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOWER DEFLECTOR ASSY  |       |      |
| 1   | 1   | 1      | LOW                   |       |      |

|     |     |        |                       |       |      |
|-----|-----|--------|-----------------------|-------|------|
| QTY | FIN | PART # | DESCRIPTION           | MAT'L | SPEC |
| 1   | 1   | 12     | RIVET                 |       |      |
| 1   | 1   | 11     | DOUBLER               |       |      |
| 1   | 1   | 10     | DEFLECTOR, UPPER HALF |       |      |
| 1   | 1   | 9      | DEFLECTOR, LOWER HALF |       |      |
| 1   | 1   | 8      | BREAKAWAY TIP LONG    |       |      |
| 1   | 1   | 7      | BREAKAWAY TIP MEDIUM  |       |      |
| 1   | 1   | 6      | LOWER DEFLECTOR       |       |      |
| 1   | 1   | 5      | 212 UPPER DEFLECTOR   |       |      |

|               |          |     |      |      |
|---------------|----------|-----|------|------|
| ORIGINAL DATE | DATE     | REV | BY   | CHKD |
| 01/11/00      | 01/11/00 | 01  | WJW  | WJW  |
| DRAWN         | DATE     | BY  | CHKD |      |
| 01/11/00      | 01/11/00 | WJW | WJW  |      |
| APPROVAL      |          |     |      |      |
| 01/11/00      |          |     |      |      |
| DESIGNED BY   |          |     |      |      |
| 01/11/00      |          |     |      |      |

|                   |                          |             |
|-------------------|--------------------------|-------------|
| APICAL INDUSTRIES | 2608 TEMPLE HEIGHTS DR.  | 170724-5300 |
|                   | OCEANSIDE, CA 92088-5312 |             |

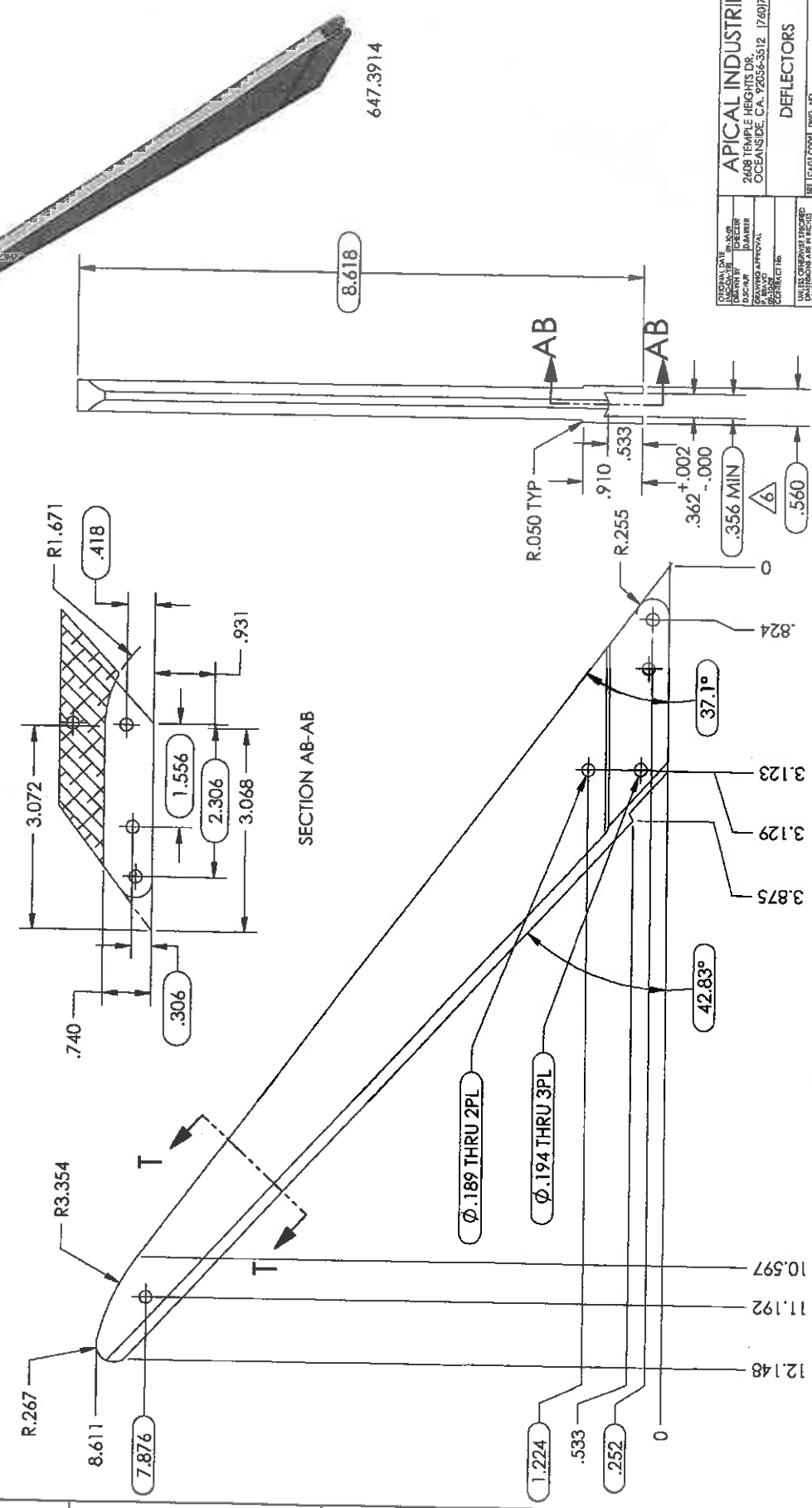
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| REV        | DATE     | BY  | CHKD | REV | DATE     |
| 01         | 01/11/00 | WJW | WJW  | 01  | 01/11/00 |
| 02         | 01/11/00 | WJW | WJW  | 02  | 01/11/00 |
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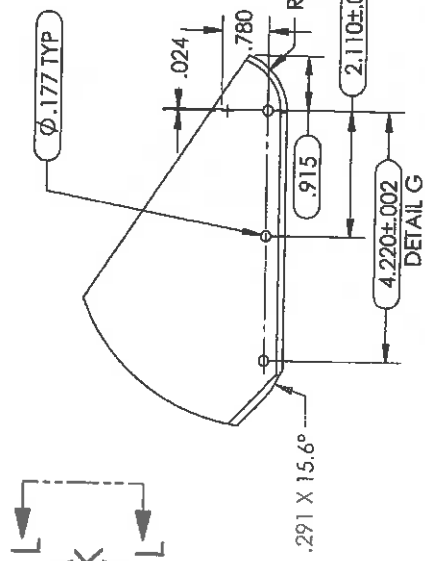
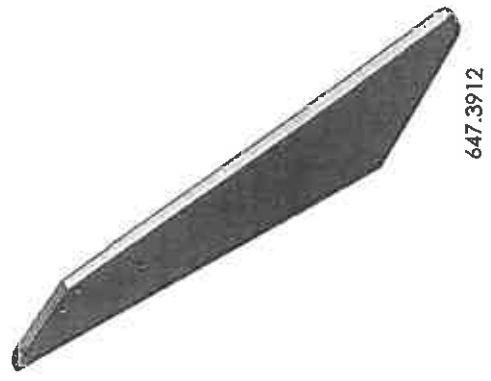
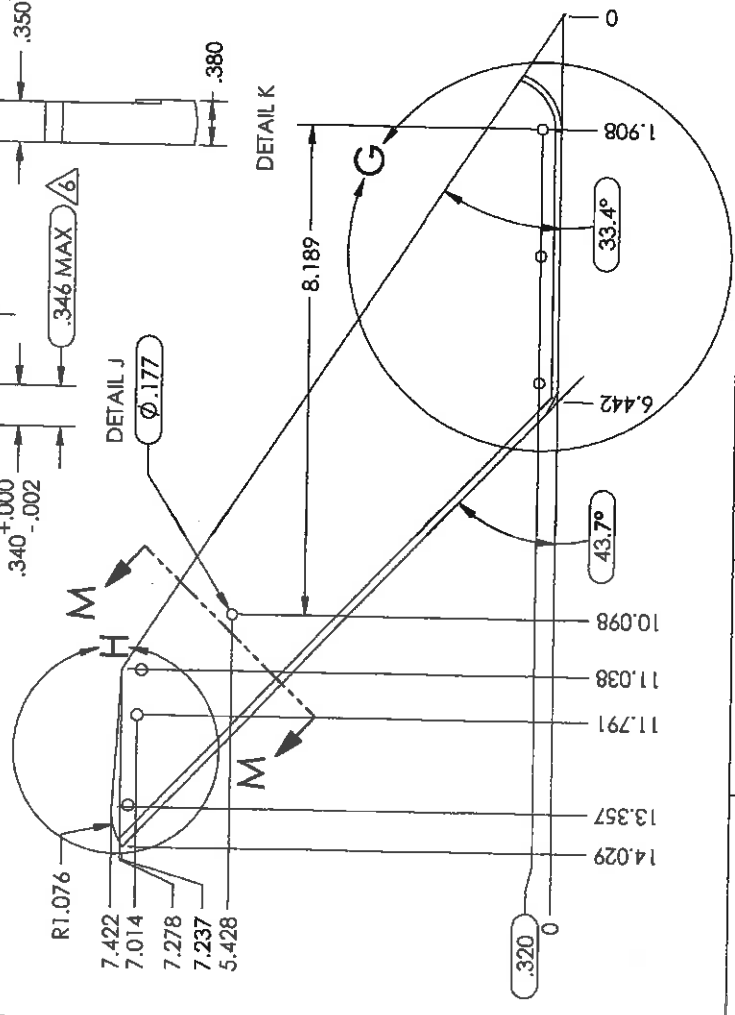
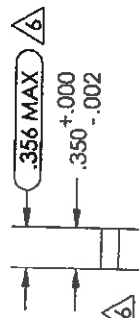
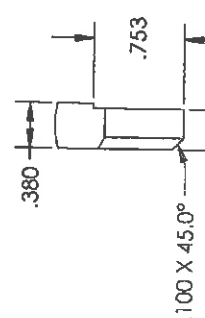
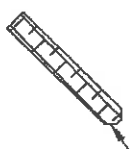
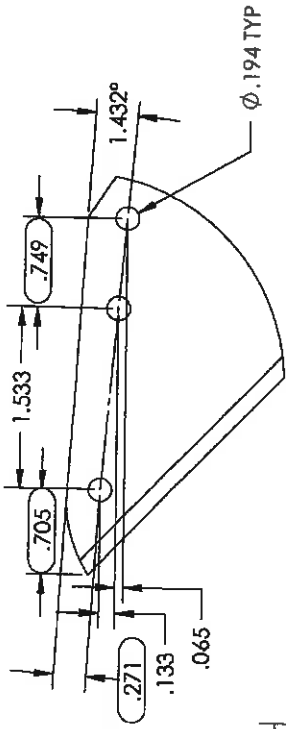
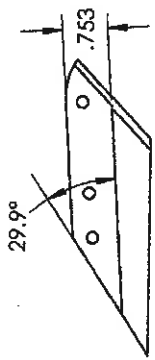
SECTION T-T



|                            |    |                          |              |
|----------------------------|----|--------------------------|--------------|
| ORIGINAL DATE              |    | APICAL INDUSTRIES        |              |
| DATE                       | BY | 2408 TEMPLE HEIGHTS DR   |              |
| 07/02/82                   | B  | OCEANSIDE, CA 92056-3312 | 1760724-5300 |
| DRAWING APPROVAL           |    | DEFLECTORS               |              |
| DATE                       | BY | DATE                     | BY           |
| 07/02/82                   | B  | 07/02/82                 | C            |
| UNLESS OTHERWISE SPECIFIED |    | SCALE NONE               |              |
| DIMENSIONS ARE IN INCHES   |    | SHEET 6 OF 12            |              |
| FRACTIONS SHALL BE 1/16    |    |                          |              |
| DECIMALS SHALL BE 3 SIG    |    |                          |              |
| ANGLES ± .5°               |    |                          |              |

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1 2 3 4 5 6 7 8



|                                        |                   |               |          |
|----------------------------------------|-------------------|---------------|----------|
| APICAL INDUSTRIES                      |                   | DEFLECTORS    |          |
| 2400 TERRY HEIGHTS DR.                 |                   | REV. C        |          |
| OCEANIDE, CA. 92055-5512 (760)724-5300 |                   | DATE 07/24/82 |          |
| DESIGNED BY                            | APICAL INDUSTRIES | DATE CODED    | 07/24/82 |
| DRAWN BY                               | APICAL INDUSTRIES | SCALE         | NONE     |
| CHECKED BY                             | APICAL INDUSTRIES | SHEET         | 1 OF 12  |
| APICAL INDUSTRIES                      |                   | 647.3900      |          |

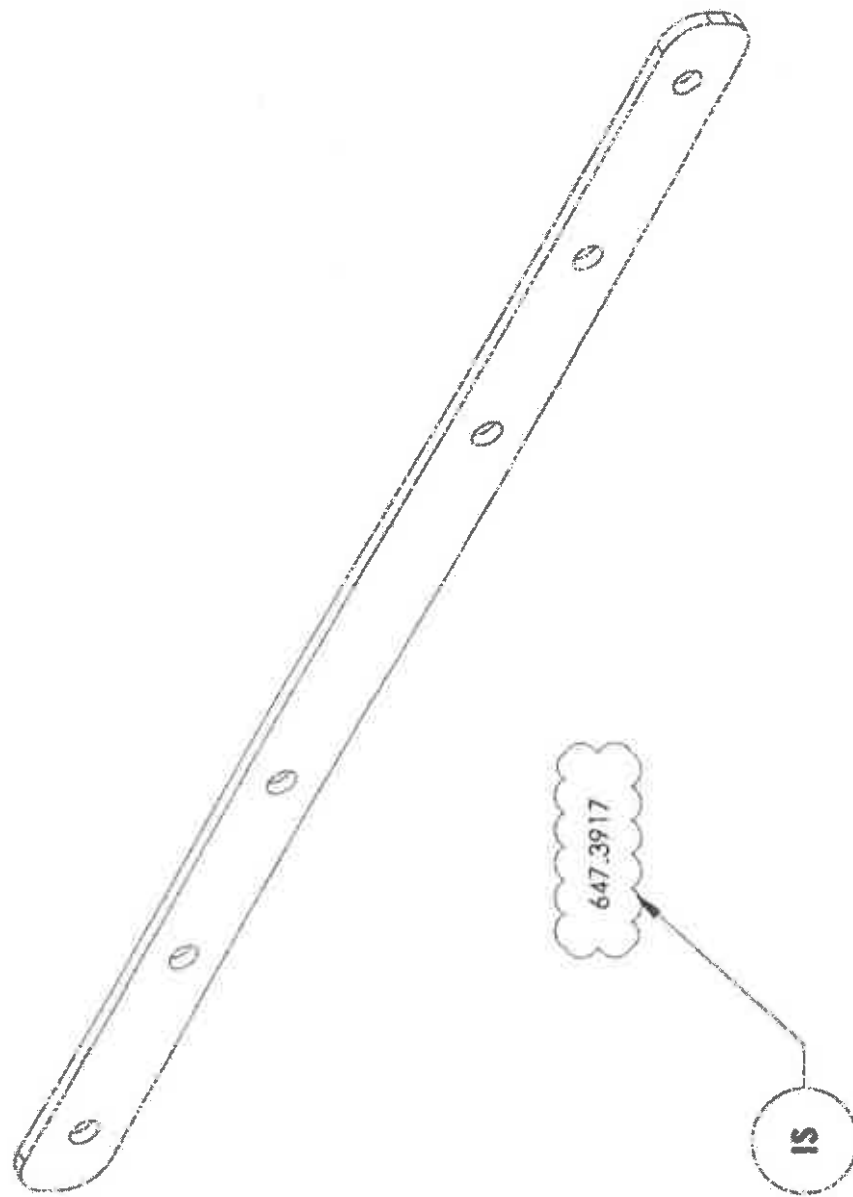
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF

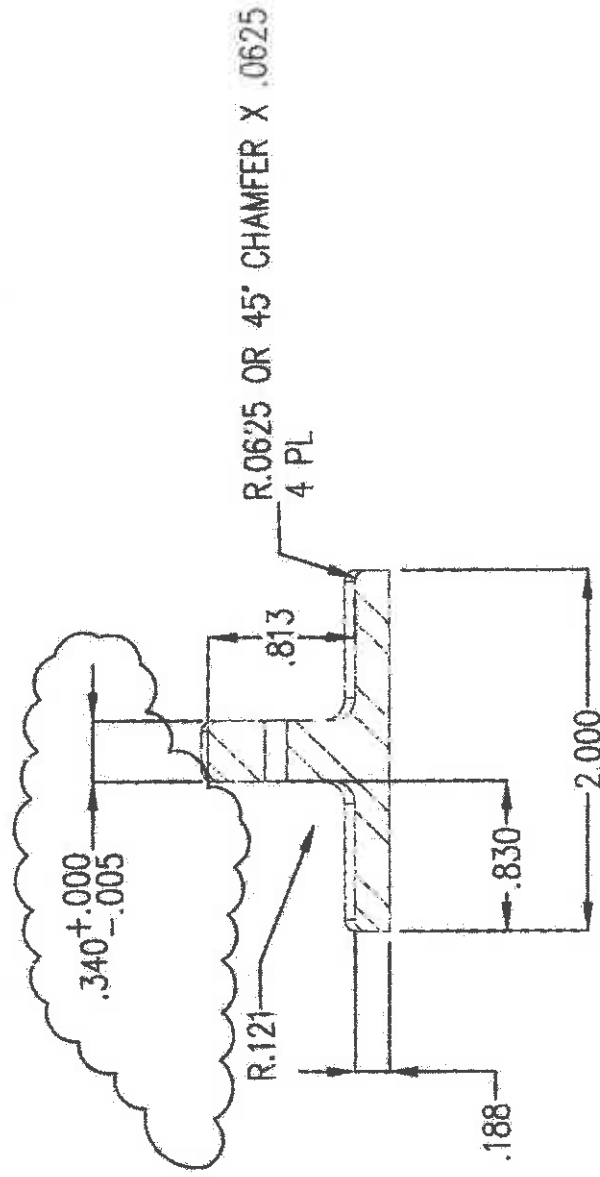


THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF



**SHEET 12, ZONE B5 IS:**



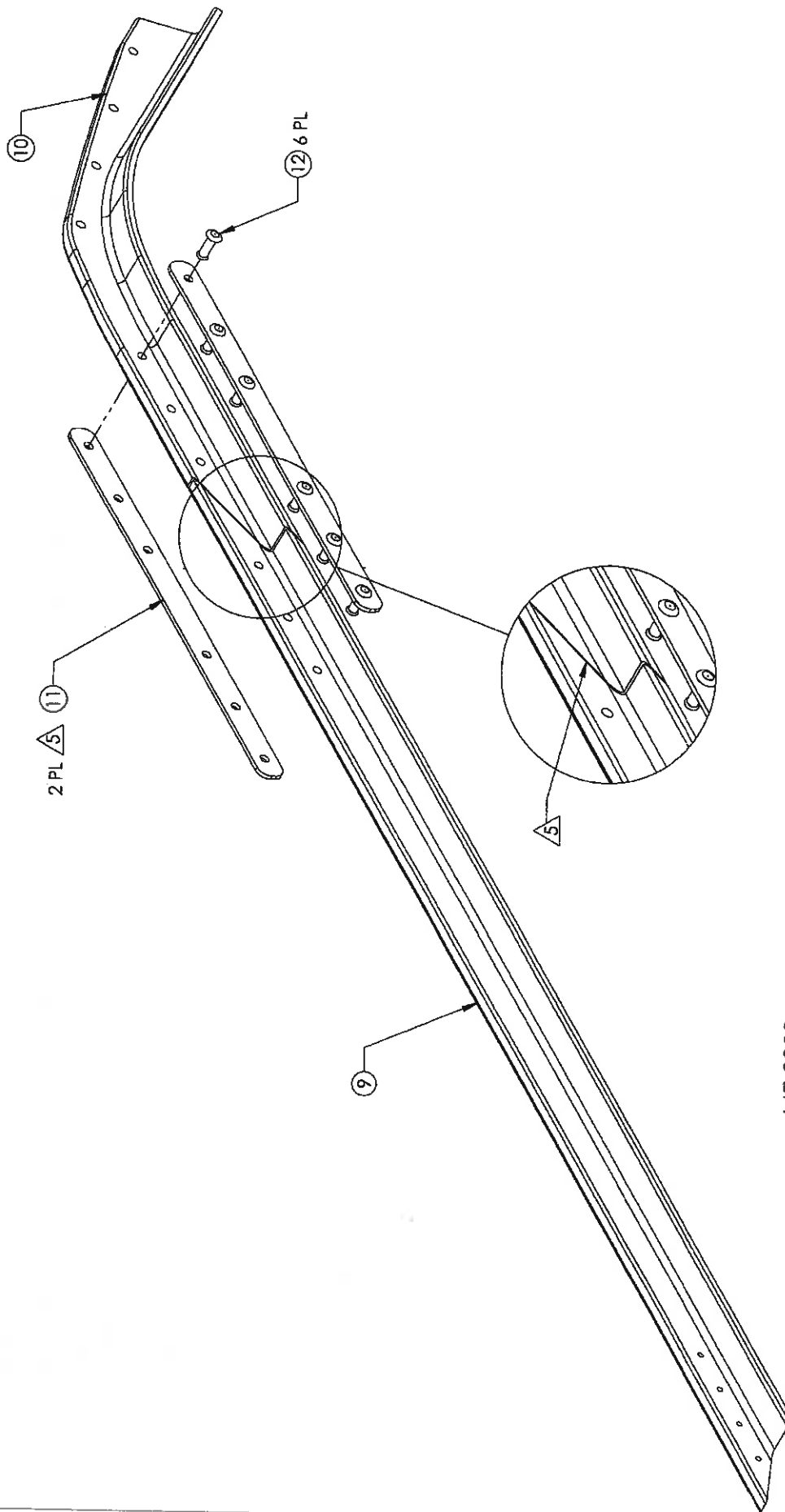


SECTION AT-AT

**SHEET 11, ZONE C1 IS:**

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1 2 3 4 5 6 7 8

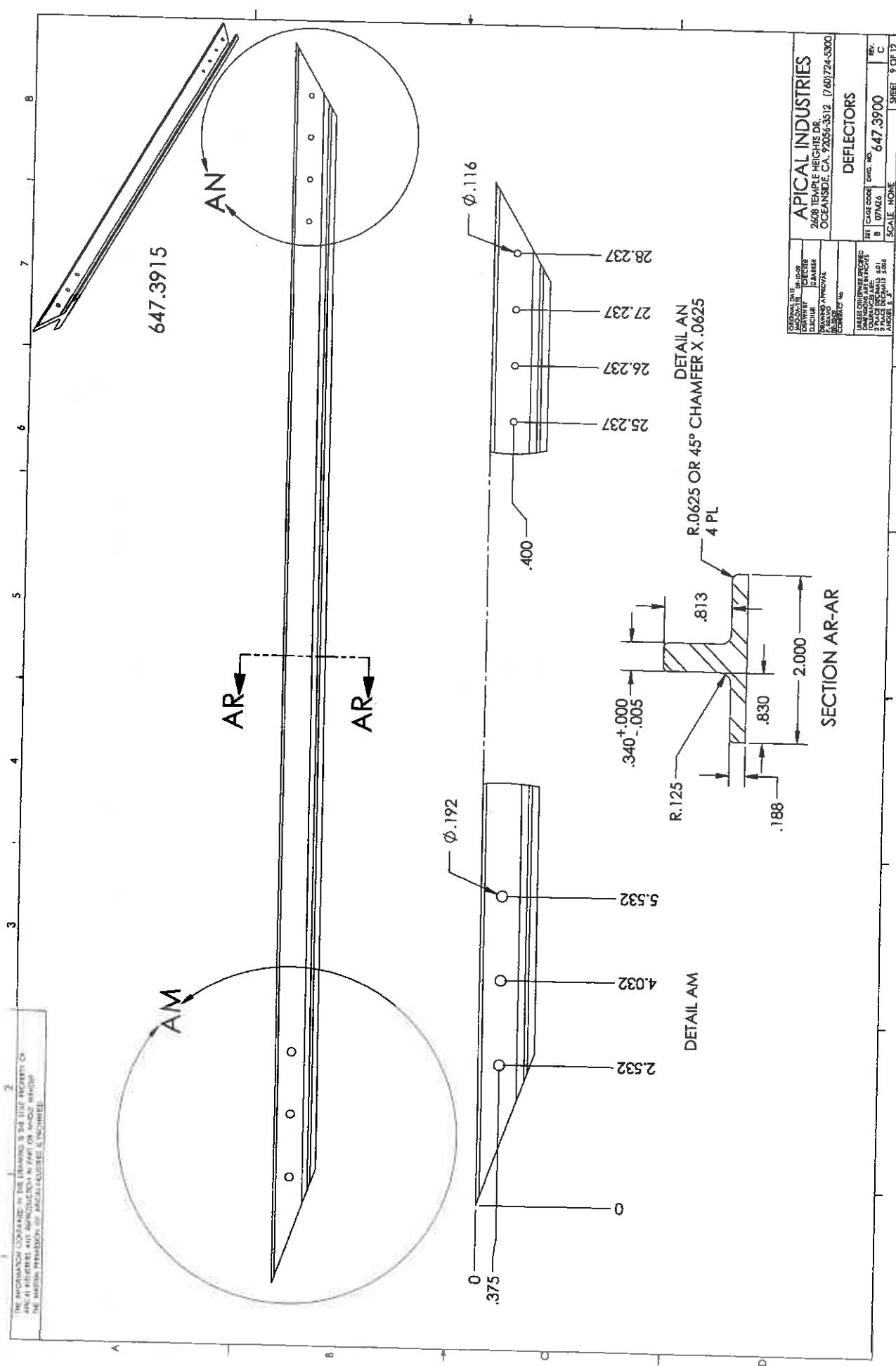


647.3903

|                              |          |         |    |
|------------------------------|----------|---------|----|
| ORIGINAL DATE                | REVISION | DATE    | BY |
| 10/1/16                      | 1        | 10/1/16 | 1  |
| DESIGNED BY                  | ENGINEER | DATE    | BY |
| 10/1/16                      | 1        | 10/1/16 | 1  |
| DRAWING APPROVAL             | DATE     | BY      |    |
| 10/1/16                      | 1        | 10/1/16 | 1  |
| CONTRACT NO.                 |          |         |    |
| UNLESS OTHERWISE SPECIFIED   |          |         |    |
| ALL DIMENSIONS ARE IN INCHES |          |         |    |
| 2 PLACE DECIMALS 4 DI.       |          |         |    |
| 3 PLACE DECIMALS 8 DI.       |          |         |    |
| ANGLES 1/2°                  |          |         |    |

|                          |            |
|--------------------------|------------|
| APICAL INDUSTRIES        | DEFLECTORS |
| 2408 TEMPLE HEIGHTS DR.  |            |
| OCEANSIDE, CA 92056-3512 |            |
| TEL: (760) 724-5300      |            |
| FAX: (760) 724-5300      |            |
| SEE CAD/CAM              | DATE       |
| 8                        | 07/16/16   |
| SCALE                    | NONE       |
| SHEET                    | 7 OF 12    |

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|                                                                                          |    |                |      |
|------------------------------------------------------------------------------------------|----|----------------|------|
| APICAL INDUSTRIES<br>2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3312 (760) 724-5300 |    | DEFLECTORS     |      |
| DATE                                                                                     | BY | CHKD.          | REV. |
| 07/06/06                                                                                 | B  | 07/06/06       | C    |
| SCALE: NONE                                                                              |    | SHEET: 3 OF 12 |      |

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